CASE REPORTS

Death Due to Erosion of a Vessel by Impaction of a Chicken Bone in a Meckel's Diverticulum

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TO the recorded causes of massive or intermittent intestinal hemorrhage with no other demonstrable symptoms may be added the extremely rare condition of erosion of a vessel owing to impaction of a chicken bone in a Meckel's diverticulum.

While diverticula occur in about 3 per cent of the population, symptoms arise in a much smaller group. Diverticula per se are subject to many complications, including inflammation, perforation, hemorrhage or obstruction.[2, 3, 6, 8] Hemorrhage is most common in children,[5, 6, 7] obstruction in adults, while acute inflammation and perforation may occur at any age. Perforation producing severe hemorrhage or peritonitis may be produced by the accumulation of fecal matter with a foreign body in the diverticulum and also by the presence of gastric mucosa in the diverticulum which secretes acid gastric juice and may produce a peptic ulcer.[1, 2, 4] The gastric mucosa may extend 1 to 2 cm. into the ileum beyond the base of the diverticulum. Retention and impaction of a foreign body with incomplete perforation to produce hemorrhage is so rare as to merit reporting.

CASE REPORT

A 68-year-old robust-appearing white female was observed at home December 24, 1948, when a daughter noted the patient appeared extremely pale and became alarmed after learning she had been passing black stools for one week. The patient stated that she was weak and short of breath at times. She had a known rheumatic heart condition for which she had been observed the past three to four years. Blood examination revealed 1,670,000 erythrocytes, hemoglobin 5.6 gm. per 100 cc., 17,000 leukocytes with 73 per cent polymorphonuclears and 27 per cent lymphocytes. The patient was admitted to hospital that evening.

Since 1944 there had been gaseous distress, belching, constipation and a gnawing feeling in the epigastrium relieved by eating.

At the time of an examination in October, 1945, the weight was 143 pounds, height 62 inches, blood pressure 140 mm. of mercury systolic and 70 mm. diastolic (this varied to 210/120 on repeated examinations), pulse rate 100 (to 74), temperature 98.6° F., and respirations 18 per minute. The heart was enlarged and a rough systolic murmur was present at the apex and aortic areas. The liver was enlarged, smooth and pulsatile. No abnormality was noted in a pelvic examination.

On January 14, 1948 (11 months before hospitalization) the patient noted black stools for a period of one week, and result of a test was positive for blood in the stool. Complete x-ray studies of the gastrointestinal tract were negative. Chest films revealed rounding of the left ventricular segment with calcified plaques in the thoracic and abdominal aorta and in the mitral ring. Results of urinalysis were normal, the serological test of the blood for syphilis was negative.

With the exception of arthritic remissions, the patient remained in fair health up to the present episode.

Course in the hospital: On admission, a transfusion of 500 cc. of citrated blood was given, vitamin K and calcium gluconate were administered, and the patient was placed in an oxygen tent. She then volunteered that the substernal compression and precordial pain, which she had previously denied on questioning, were alleviated. A second transfusion was given the next day and the erythrocyte count rose to 2,580,000 and the hemoglobin to 6.6 gm. per 100 cc., or a value of 40 per cent. However, dyspnea and intense substernal pain developed; this persisted for several hours and required repeated dosages of narcotic for relief. The following day erythrocytes numbered 2,200,000 cells and the hemoglobin value was 37 per cent. A third transfusion was given, but the patient's condition deteriorated progressively, and with intense dyspnea, substernal pain and sweats, she died December 30, 1948. Physical findings, with the exception of signs of anemia and dullness in the lung bases, were unchanged.

At postmortem examination the stomach and upper bowel were normal in color and relatively empty, whereas all the colon and the lower small bowel were distended with blackish contents, as though from hemorrhage. In the ileum, approximately 1 meter from the ileocecal valve, there was clear-cut division between the normal appearance and the abnormal. At that point there was a Meckel's diverticulum measuring 6 cm. in length, 1.2 cm. in diameter at the tip and 1.5 cm. at the base. The diverticulum was tense, red in color with a blackish discoloration visible in the depths through the wall, and the vessels were injected. A hard mass was felt inside. The diverticulum was opened and a black flat triangular foreign object shaped like a wing and terminating in a spear (Figure 1) and having the appearance and consistency of a chicken bone was extracted. This was 1 mm. thick and 25 mm. in length, 10 mm. in width at the base, tapering to a spear 1 mm. in diameter. The wide blade-like edge of the bone pointed distally in the diverticulum (away from the ileum), while the point was imbedded and impacted in the base (Figure 2) where there was an ulcer crater 7 mm. in diameter about a reddened pouting area 3 mm. in diameter (Figure 2). No other lesions were found. The diagnosis was as follows:

Death was due to massive intestinal hemorrhage produced by bleeding from a vessel in a traumatic ulcer at the base of a Meckel's diverticulum, caused by an impacted penetrating chicken bone.

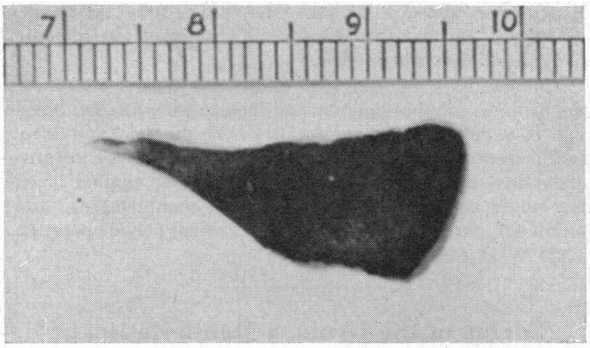

Figure 1.—Reproduction of chicken bone removed from Meckel's diverticulum which produced fatal hemorrhage by penetrating vessel.

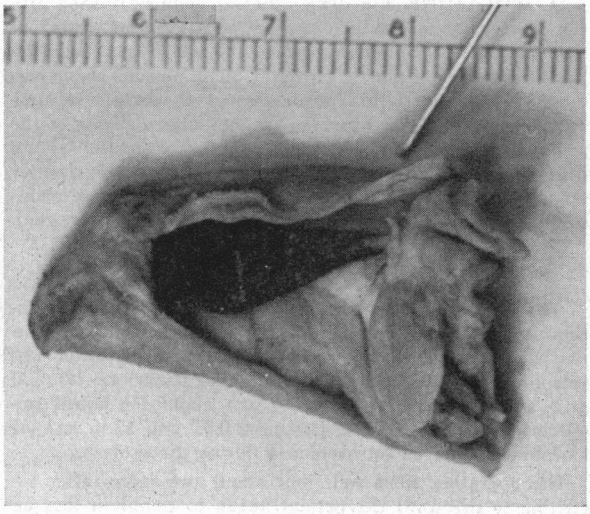

Figure 2.—Chicken bone in situ in diverticulum. Pin points to spear impacted in base.

DISCUSSION

The symptoms at the time of death were of a cardiac nature, yet the continued bleeding was directly responsible for death of the patient. The length of time the bone had been impacted in the diverticulum is conjectural. From the history of intestinal bleeding one year before death, it appears that the foreign body may have been present at least that length of time. The black appearance of the bone indicates it had been present for a considerable period.

SUMMARY

Death was caused by hemorrhage due to an erosion of a vessel by an impacted chicken bone in a Meckel's diverticulum.

Analysis of the history indicates that the bone may have been present in the diverticulum for at least a year.

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Tubal Pregnancy in Tuberculous Salpingitis

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THERE is considerable variation in the reported figures for the incidence of tuberculous salpingitis. The condition is not uncommon—it accounts for approximately 5 per cent of all cases of chronic salpingitis. The decreased incidence in the frequency of gonorrheal and pyogenic salpingitis as a result of adequate therapy in the acute stages with sulfonamides and the antibiotics may cause a relative increase in the frequency of tuberculous salpingitis. The combination of tubal pregnancy and tuberculous salpingitis is so rare as to warrant the reporting of all such cases.

CASE REPORT

A 39-year-old white married woman was admitted to Temple Hospital, Los Angeles, on May 18, 1948, with a complaint of lower abdominal pain of three hours' duration.

Present Illness: About 8 o'clock the evening of admission the patient had severe pain of sudden onset in the right lower quadrant of the abdomen, and the pain soon extended across the lower abdomen. These pains were continuous and aggravated by movement. There were no associated gastrointestinal or genito-urinary symptoms. Menstrual periods were always normal and regular. The last normal menstrual period was March 20, 1948. The patient began "spotting" on April 30, bled for five days, then passed clots and five pads daily had been used until admission. A physician who had been consulted by the patient two days prior to admission had suggested the possibility of threatened abortion.

Past History: In June 1944 the patient had had a somewhat similar episode of abdominal pain and bleeding. Operation at another hospital on this occasion disclosed an ectopic pregnancy, and a left tubo-oophorectomy was performed (the pathological report could not be obtained). There had been no other pregnancies, although no contraceptive measures had been taken. The patient gave no history of pulmonary or extrapulmonary tuberculosis, and as far as was known no member of her family or close contact had had tuberculosis. An x-ray film of the chest in December 1947 was negative for tuberculosis.

Physical Examination: The patient was acutely ill, apprehensive, well-nourished, and appeared to be about the stated age. The temperature was 98.6° F., pulse rate 90, respirations 22 and blood pressure 90 mm. of mercury systolic and 70 mm. diastolic. Positive findings were limited to abdominal and pelvic examinations. The abdomen was moderately and uniformly distended with a slight decrease in movements over the lower part. There was moderate tenderness and resistance over the whole lower abdomen on even slight pressure. Rebound tenderness was referred to the pressure point. There was no blood in fluid aspirated from the abdomen.